U.S. Department of the Interior
Bureau of Land Management
White River Field Office
73544 Hwy 64
Meeker, CO 81641

ENVIRONMENTAL ASSESSMENT

NUMBER: CO-110-2005-037-EA

CASEFILE/PROJECT NUMBER (optional): COC063273

PROJECT NAME: APD for well No. 5-4A-1100

LEGAL DESCRIPTION: T1S, R100W, Sect. 5, NWNW, 6th P.M.

APPLICANT: EnCana Oil & Gas (USA) Inc.

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES:

Proposed Action: The applicant proposes to construct a 1.3 acre well pad with dimensions of 200 x 290 feet and upgrade 1.8 miles of existing road. Direct surface disturbance acreage would equal approximately 1.3 acres, and construction activities would tentatively start on 15 July 2005, with a completion date in August 2005. The proposed well pad location is at an elevation of 6,412 feet and is located in the West Fork Spring Creek drainage (Figure 1).

Access to the proposed well pad location would include using an existing road. Plans for improvement and/or maintenance of existing roads include maintaining the existing road in as good or better condition than at present and installing a low water crossing prior to commencement of drilling operations. The subgrade (i.e., running surface) width would be approximately 16 feet, with a total disturbed width of 40 feet. The low water crossing would be used during drilling as conditions dictate, and upon completion, the crossing would be upgraded with corrugated metal pipe. If production is established, BLM and EnCana will meet at the site to determine permanent culvert and/or low water crossing design.

Site preparation for production would be done with standard excavation equipment using native materials. All above ground permanent structures including production equipment would be painted "Juniper Green" to reduce visual impacts.

The production pit would be netted to reduce impacts to waterfowl. Drilling fluid would be evaporated and then buried in the reserve pit when dry. Produced fluid would be contained in the reserve pit during completion and testing. The reserve pit would be fenced on three sides during drilling operations and on the fourth side when drilling operations are complete and would remain fenced until backfilled.

Rehabilitation of unseeded, previously disturbed areas would consist of backfilling and contouring the reserve pit area, back sloping and contouring all cut and fill slopes, and seeding. Backfilling, leveling and contouring would take place as soon as all pits have dried. If production is obtained, the unused area would be restored as soon as possible. Surface reclamation would be accomplished by planting mixed grasses as per formula by the surface owner at the time of reclamation.

No Action Alternative: The proposed well, well pad and access road would be constructed. No new surface disturbing or drilling activity would occur.

NEED FOR THE ACTION: To respond to request by applicant to exercise lease rights and develop potential hydrocarbon reserves.

PLAN CONFORMANCE REVIEW: The Proposed Action is subject to and has been reviewed for conformance with the following plan (43 CFR 1610.5, BLM 1617.3):

Name of Plan: White River Record of Decision and Approved Resource Management Plan (ROD/RMP).

Date Approved: July 1, 1997

Decision Number/Page: Pages 2-49 thru 2-52

Decision Language: "To make public lands available for the siting of public and private facilities through the issuance of applicable land use authorizations, in a manner that provides for reasonable protection of other resource values."

AFFECTED ENVIRONMENT / ENVIRONMENTAL CONSEQUENCES / MITIGATION MEASURES:

STANDARDS FOR PUBLIC LAND HEALTH: In January 1997, Colorado Bureau of Land Management (BLM) approved the Standards for Public Land Health. These standards cover upland soils, riparian systems, plant and animal communities, threatened and endangered species, and water quality. Standards describe conditions needed to sustain public land health and relate to all uses of the public lands. Because a standard exists for these five categories, a finding must be made for each of them in an environmental analysis. These findings are located in specific elements listed below:

CRITICAL ELEMENTS

AIR QUALITY

Affected Environment: There are no special designation air sheds or non-attainment areas nearby that would be affected by the proposed action. During periods of low precipitation, air quality in the area of the proposed action is often diminished by dust caused by human disturbance.

Environmental Consequences of the Proposed Action: The proposed action would result in short term, local impacts to air quality during and after construction, due to dust being blown into the air. After adequate vegetation is reestablished, blowing dust should return to pre-construction levels.

Environmental Consequences of the No Action Alternative: No increase in dust will occur.

Mitigation: Applicant shall be required to spread water on road surfaces to control fugitive dust.

CULTURAL RESOURCES

Affected Environment: The proposed well pad and access road have been inventoried at the Class III (100% pedestrian) level (Conner and Davenport 2004, Conner 2004) with no new cultural resources located within the immediate road upgrade and well pad area. One isolated find was located outside of the well pad location to the west and should be avoided by the proposed construction.

Environmental Consequences of the Proposed Action: The proposed action should not impact any known cultural resources.

Environmental Consequences of the No Action Alternative: there would be no new impacts to cultural resources under the No Action Alternative.

Mitigation: 1. The operator is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are uncovered during any project or construction activities, the operator is to immediately stop activities in the immediate area of the find that might further disturb such materials, and immediately contact the authorized officer (AO). Within five working days the AO will inform the operator as to:

- whether the materials appear eligible for the National Register of Historic Places
- the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not necessary)
- a timeframe for the AO to complete an expedited review under 36 CFR 800-11 to confirm, through the State Historic Preservation Officer, that the findings of the AO are correct and that mitigation is appropriate.

If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation cost. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the operator will then be allowed to resume construction.

2. Pursuant to 43 CFR 10.4(g) the holder of this authorization must notify the AO, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), you must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the authorized officer.

INVASIVE, NON-NATIVE SPECIES

Affected Environment: The project is within a Foothills Swale Range site with the predominate vegetation being; greasewood, Wyoming big sagebrush, basin wildrye, western wheatgrass and various other grasses and forbs. Soils are deep and well drained. Livestock use of this area is relatively high and has decreased the cover of western wheatgrass. Western wheatgrass is distributed throughout the plant community but is of low density and vigor. No noxious seed species are on site, with the exception of cheatgrass which is found in all of the surrounding vegetation associations. Noxious weeds of concern to this area include; bull, musk, and Canada Thistles, Russian, spotted and diffuse knapweeds, burdock and black henbane. All of these noxious weeds are adapted to this site.

Environmental Consequences of the Proposed Action: With proper reclamation the project area is expected to vegetate adequately. The proposed seed mix contains non-native species which are adapted to the site, adequately stabilize soils, do not invade the adjacent plant communities and are grazing tolerant. With control of noxious weeds there would not be a problem with weeds dominating the site and spreading to the adjacent native plant communities.

Environmental Consequences of the No Action Alternative: There would be no impacts.

Mitigation: Permit holder is required to revegetate the site using Standard Seed Mix 3 from the White River ROD/RMP Table B-1:

Table B-1 - Standard Seed Mixes

Seed Mix #	Species (Variety)	Lbs PLS/ Acre	Range sites
3	Pubescent wheatgrass (Luna) Western wheatgrass (Rosanna) Crested wheatgrass (Ephraim) Indian ricegrass (Nezpar) Orchardgrass (Paiute) Yellow sweetclover (Midrid)	4 2 1 1 1 0.5	Deep Loam, Loamy 10"-14", Loamy Breaks, Loamy Slopes, Rolling Loam, Valley Bench

Permit holder is required to control noxious weeds within the project area. Application of herbicides must be under field supervision of an EPA-certified pesticide applicator. Herbicides must be registered by the EPA and application proposals must be approved by the BLM.

MIGRATORY BIRDS

Affected Environment: Low elevation shrubland dominated by greasewood is the dominant cover class within a 328-foot radius of the proposed well pad location using Colorado Vegetation Classification information. This cover class comprises 3.4 acres, or 42.3% of the total area (i.e., 8 acres). Shrubland codominated by sagebrush and greasewood, with some rabbitbrush is the second most common cover class within a 328-foot radius of the proposed well pad location and comprises 1.39 acres, or 17.3% of the total area. In addition to sagebrush communities associated with the proposed action, there is pinyon-juniper regeneration at the proposed well pad location. Codominant juniper and sagebrush comprise 1.24 acres, or 15.38%, and pinyon-juniper woodland with mixed understory comprises 1.7 acres, or 21.2% of the total area within a 328-foot radius of the proposed well pad location. Migratory bird species fulfill nesting functions in these predominantly sagebrush, greasewood and pinyon-juniper habitats during the months of May, June, and July. Species associated with these shrublands are typical and widely represented in the Resource Area and region. Bird populations occurring within the White River Resource Area sagebrush and pinyon-juniper communities identified as having higher conservation interest by the Rocky Mountain Bird Observatory/Partners in Flight program (i.e., Brewer's sparrow, gray flycatcher, and gray vireo) are abundant and well distributed in suitable habitats throughout this area.

Environmental Consequences of the Proposed Action: Construction activities associated with the proposed action will begin on 15 July 2005, outside of the breeding season for migratory birds. The applicant has voluntarily agreed to postpone construction activities from 1 July to 15 July to avoid possible disturbance to nesting migratory birds within and adjacent to the project area. Because construction activities will take place outside of the breeding season for migratory birds, the proposed action will have no measurable influence on affected populations of migratory birds within and adjacent to the project area.

Environmental Consequences of the No Action Alternative: There would be no action authorized that would have potential to disrupt the breeding activities of migratory birds within the proposed project area.

Mitigation: The applicant has voluntarily agreed to postpone construction activities from 1 July to 15 July to avoid possible disturbance to nesting migratory birds within and adjacent to the project area. As such, construction activities will be authorized to begin on 15 July 2005.

THREATENED, ENDANGERED, AND SENSITIVE ANIMAL SPECIES (includes a finding on Standard 4)

Affected Environment: No animals listed, proposed, or candidate to the Endangered Species Act inhabit or derive important benefit from the project area. Because of the dominance of pinyon-juniper woodlands and stands of greasewood within, and adjacent to the proposed well pad location, the site is not classified as suitable greater sage grouse habitat. Consequently, the proposed location does not fall within the mapped overall range for greater sage grouse.

Environmental Consequences of the Proposed Action: Because the proposed location does not fall within the overall range and extent of greater sage grouse, and because habitat conditions limit, and consequently reduce habitat suitability for sage grouse within the project area, the proposed action would have no measurable or foreseeable impact to populations of greater sage grouse or their habitat.

Environmental Consequences of the No Action Alternative: There would be no action authorized that would have potential to influence special status species or their habitats.

Mitigation: None

Finding on the Public Land Health Standard for Threatened & Endangered species: Because there are no special status terrestrial or aquatic wildlife species inhabiting or deriving benefit from the project area, application of the Public Land Health Standards for T&E wildlife species are not applicable to this action. Implementation of either the proposed or no-action alternatives would have no influence on the status of land health standards applied to off-site lands.

WASTES, HAZARDOUS OR SOLID

Affected Environment: There are no known hazardous or other solid wastes on the subject lands. No hazardous materials are known to have been used, stored or disposed of at sites included in the project area.

Environmental Consequences of the Proposed Action: No listed or extremely hazardous materials in excess of threshold quantities are proposed for use in this project. While commercial preparations of fuels and lubricants proposed for use may contain some hazardous constituents, they would be stored, used and transported in a manner consistent with applicable laws, and the generation of hazardous wastes would not be anticipated. Solid wastes would be properly disposed of.

Environmental Consequences of the No Action Alternative: No hazardous or other solid wastes would be generated under the no-action alternative.

Mitigation: The operator shall be required to collect and properly dispose of any solid wastes generated by the proposed actions.

WATER QUALITY, SURFACE AND GROUND (includes a finding on Standard 5)

Affected Environment: The proposed action is located along an existing road in Elledge Draw, which is tributary to West Fork Spring Creek. Both are tributary to Spring Creek and the White River. The State of Colorado has identified these segments of streams in segment 13a, all tributaries to the White River including all wetlands, lakes and reservoirs from a point immediately above the confluence with Piceance Creek to a point immediately above the confluence with Douglas Creek except for the specific listings in Segments 13b through 20.

A review of the Colorado's 1989 Nonpoint Source Assessment Report (plus updates), the 305(b) report, the 303(d) list and the Unified Watershed Assessment was one to see if any water quality concerns have been identified. The State has classified this segment as a "Use Protected" reach. Its designated beneficial uses are: Warm Aquatic Life 2, Recreation 2, and Agriculture. The antidegredation review requirements in the Antidegredation Rule are not applicable to waters designated use-protected. For those waters, only the protection specified in each reach will apply. For this reach, minimum standards for three parameters have been listed. These parameters are: dissolved oxygen = 5.0 mg/l, pH = 6.5 - 9.0 and Fecal Coliform = 2000/100ml and 630/100 ml E. coli. In addition standards for inorganic and metals have also been listed and can be found in the table of stream classifications and water quality standards. This segment retained its Recreation Class 2 designation after sufficient evidence was received that a Recreation Class 1a use was unattainable.

Water quality data is not available for this upper reach of West Fork Spring Creek and Elledge Draw. These segments of stream are considered to be ephemeral drainages which flow in direct response to winter snow melt and late summer/fall rainstorms. Water quality of precipitation is considered to be of good quality, but can be high is sediment depending on the magnitude and duration of the storm event.

Oil and Gas operations are considered to be a light industrial activity by the Colorado Department of Public Health and Environment. As industrial dischargers the applicant is required to obtain a permit authorizing the discharge of stormwater from these well pads and roads and show how the lessee will prevent sediment from entering the surrounding water ways.

Environmental Consequences of the Proposed Action: Impacts to water quality from development of this well and road would be similar to other surface disturbing activities. Some of the impacts would be exposure of soil surface to wind and water erosion, reduced water quality due to erosion of sediment and salt, off roads, drill pads, and pipeline rights of ways, and piping or rill erosion where well pads and roads are exposed to climatic elements. These impacts would be short term until re-vegetation has occurred. If the well turns out to be a dry hole, reclamation should be started immediately by re-contouring and seeding the well pad.

Although low water crossing are preferable to culverts (see riparian section below) it is recognized certain conditions do not warrant such a Best Management Practice (BMP). To help minimize impacts from the placement of the multiple culverts it is important to follow guidelines established in the BLM manual. In addition, use BMPs to re-establish the protective vegetative cover and to collect sediment during runoff events

Environmental Consequences of the No Action Alternative: Impacts from the no-action alternative are not anticipated.

Mitigation: See Riparian and Soils sections for mitigation.

Finding on the Public Land Health Standard for water quality: The water quality of West Fork Spring Creek and Elledge Draw is well within the criteria set by the state, thus meeting the land health standard. The proposed action will not change this status if the mitigation adhered to.

WETLANDS AND RIPARIAN ZONES (includes a finding on Standard 2)

Affected Environment: The upper mainstem of Spring Creek is a relatively large perennial system contained within an incised and moderately entrenched channel. Channel vegetation, primarily facultative wheatgrasses and inland saltgrass, are only partially effective in stabilizing banks and floodplain features and flow events typically carry large sediment loads. This system was recently rated as Functioning at Risk and channel bed instability is regularly evidenced by nickpoints in the upper mainstem and West Fork.

Environmental Consequences of the Proposed Action: The access road and proposed low water crossing are the only project features that have reasonable potential to affect riparian and channel resources. Drainage crossings along the existing access road along the Spring Creek valley consist of improperly sized and maintained culverts and unhardened low water crossings. Both drainage crossing methods have aggravated channel instability issues, either by cans filling with debris during flood events and temporarily damming the stream or vehicle tracks rutting the stream bed which compromises the integrity of the stream bed and prompts episodic downcutting, bank erosion, or excessive sediment delivery downstream. It is recommended that a hardened low-water crossing be installed both as a temporary and permanent means of stream crossing. Properly designed, this form of crossing would provide a stable road bed across the entire floodplain (i.e., roadbed most susceptible to saturation), be immune from accumulating trash during floods and allow flood flows to pass without damaging the structure and, if elevated slightly (12-18”), provide a bed control structure that would help stabilize this stream reach by effectively accumulating and storing sediment and accelerating and enhancing floodplain development for a considerable distance upstream.

Environmental Consequences of the No Action Alternative: It is likely that failure to properly design an armored crossing site would increase both the intensity and extent of impacts to this stream system and would increase the likelihood of the crossing interfering with the rate and ultimate progress of channel restoration processes.

Mitigation: A low-water crossing is considered preferable to culvert designs. Successful stream crossings in fine alluvial material have been achieved in other parts of the Resource Area when a geo-textile fabric was used in conjunction with a compartmentalized gabion or blanket device. This crossing should be developed so as not to interfere with ongoing stream channel processes, that is, the final grade of the structure must be no lower than current channel bed and

floodplain and should not exceed 18" above the current profile. In order to gain coincident long-term benefits to the channel, it is recommended that the low-water structure be elevated between 12 and 18 inches above existing channel and floodplain levels and closely approximate the channel's current geometry. The structure should extend an appropriate distance beyond either side of the floodplain to fully accommodate flood flows.

Finding on the Public Land Health Standard for riparian systems: This system varies in its functional rating between proper functioning condition (PFC) and functional at risk (FAR). The stream reach encompassing the proposed crossing is categorized as functioning-at-risk with a static or declining trend, in part due to inappropriately designed culvert and low-water road crossings and, as such, this reach does not meet the land health standards for riparian community health. Installation of a low-water crossing that is designed to complement channel recovery processes would contribute to improving trends and thereby help meet the land health standard over time.

The no action alternative would involve continued vehicle travel across an unimproved low-water crossing and persist in aggravating detrimental effects to the channel (e.g., excessive sedimentation, disruptions to channel bed stability). This alternative would contribute to actions that are presently preventing this stream system from gaining an improving trend and meeting Standard 2.

CRITICAL ELEMENTS NOT PRESENT OR NOT AFFECTED: No ACEC's, flood plains, prime and unique farmlands, or Wild and Scenic Rivers, threatened, endangered or sensitive plants exist within the area affected by the proposed action. For threatened, endangered and sensitive plant species Public Land Health Standard is not applicable since neither the proposed nor the no-action alternative would have any influence on populations of, or habitats potentially occupied by, special status plants. There are also no Native American religious or environmental justice concerns associated with the proposed action.

NON-CRITICAL ELEMENTS

The following elements **must** be addressed due to the involvement of Standards for Public Land Health:

SOILS (includes a finding on Standard 1)

Affected Environment: Baseline soils data have been collected for Rio Blanco County by the Natural Resource Conservation Service (NRCS) and are published in an order III Soil Survey. This survey is available for review from the White River Field Office. The table below identifies soil characteristics for the soils encountered from the proposed action

Proposed Action	Soil Number	Soil Name	Slope	Range site	Salinity	Run Off	Erosion Potential	Bedrock
Access Road	36	Glendive fine sandy loam		Foothills Swale	2-4	Slow	Slight	>60

Proposed Action	Soil Number	Soil Name	Slope	Range site	Salinity	Run Off	Erosion Potential	Bedrock
Access Road at well #5-4C-1100	74	Rentsac-Moyerson-Rock Outcrop complex	5-65%	PJ Woodlands/Clayey Slopes	<2	Medium	Moderate to very high	10-20

The soils identified in the table above have characteristics as being slightly saline. Revegetation limitations for these soil types would include an arid climate, droughty soil condition and elevated salt content. There have not been any special designations assigned to this location such as fragile soil, high salt concentrations, excessive erosion, or steep slopes.

Environmental Consequences of the Proposed Action: Short-term impacts would be expected from any surface disturbing activity. Impacts from the proposed well pad would be loss of the protective vegetation cover, possible increase in salt and sedimentation during storm events and soil compaction from earth moving equipment. These impacts could continue until successful re-vegetation has occurred.

In addition, roads are a large contributor to suspended sediment discharge from water running off of roads. Low water crossing are preferable to culverts. To help minimize impacts from the development of the proposed action, the BLM recommends installation of an engineered low water crossing (see mitigation in the Riparian section above). In addition, use of additional BMPs to re-establish the protective vegetative cover and to collect sediment during runoff events would also help minimize impacts.

Environmental Consequences of the No Action Alternative: In the no-action alternative, neither the surface disturbance nor the impacts to soils resources would occur.

Mitigation: When erosion is anticipated, sediment barriers shall be constructed to slow runoff, allow deposition of sediment, and prevent it from leaving the site. In addition, straining or filtration mechanisms may also contribute to sediment removal from runoff

Finding on the Public Land Health Standard for upland soils: Impacts to these soils would *not* cause it to no longer meet the standards established by the State of Colorado which is the Public Land Health Standard for soils, provided the recommended mitigation is applied.

VEGETATION (includes a finding on Standard 3)

Affected Environment: The project is within a Foothills Swale Range site with the predominate vegetation being; greasewood, Wyoming big sagebrush, basin wildrye, western wheatgrass and various other grasses and forbs. Soils are deep and well drained. Livestock use of this area is relatively high and has decreased the cover of western wheatgrass. Western wheatgrass is distributed throughout the plant community but is of low density and vigor.

Environmental Consequences of the Proposed Action: The project would disturb this vegetation area for the life of the project. Following reclamation this site would be reclaimed

with adapted soil holding species. The species used in reclamation would act to stabilize the soils and act as a cover crop, which over time would be replaced by adjacent native species.

Environmental Consequences of the No Action Alternative: There would be no impacts.

Mitigation: Refer to recommended mitigation in the "INVASIVE, NON-NATIVE SPECIES" section above.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Wildlife, Aquatic and Wildlife, Terrestrial): Following reclamation the plant communities on site would meet the standard for plant communities.

WILDLIFE, AQUATIC (includes a finding on Standard 3)

Affected Environment: The overall Spring Creek system is intermittent and incapable of supporting aquatic life beyond rudimentary and seasonal invertebrate forms.

Environmental Consequences of the Proposed Action: The proposed action would have no conceivable influence on aquatic habitats.

Environmental Consequences of the No Action Alternative: There would be no action authorized that would have any potential influence on aquatic function or condition.

Mitigation: None

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Terrestrial): The proposed and no-action alternatives would have no conceivable influence on the condition or function of downstream channel or riparian systems, and thus have no potential to influence the status of land health standards as applied to those stream reaches.

WILDLIFE, TERRESTRIAL (includes a finding on Standard 3)

Affected Environment: The proposed project area is classified as big game severe winter range according to the White River ROD/RMP. Deer and elk densities are generally highest within, and adjacent to the project area from October through January and again in April and early May.

Non-game wildlife using this area are widely distributed in extensive sagebrush, greasewood, and pinyon-juniper habitats across the Resource Area and northwest Colorado. Moreover, no narrowly distributed or highly specialized species or sub-specific populations are known to occur in the West Fork Spring Creek drainage. Small mammal populations and distribution are poorly documented within and adjacent to the proposed project location. Furthermore, species potentially occurring on these sites are widely distributed throughout the State and the Great

Basin or Rocky Mountain regions. Upland wildlife species that occur within the project area display broad ecological tolerance and are known to occur in habitats ranging from low elevation foothill sites to high elevation alpine sites.

Nongame bird abundance and composition associated with the project area's woodland and shrubland habitats are considered representative and complete with no obvious deficiencies in composition. In addition, associated uplands surrounding the pad location are composed of submature and encroaching pinyon-juniper woodlands that have no utility as raptor nest habitat.

Environmental Consequences of the Proposed Action: The proposed area is classified as elk severe winter range according to the White River ROD/RMP; however, because the proposed action will take place during the months of July and August, and because current elk populations within and adjacent to the proposed location are generally considered as meeting or exceeding current management objectives according to guidelines established in the White River ROD/RMP, no timing limitation will be applied to this application.

Environmental Consequences of the No Action Alternative: There would be no action authorized that would influence local habitat character or animal populations.

Mitigation: None

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Aquatic): The lands surrounding the proposed well pad location currently meet Land Health Standards for terrestrial wildlife. Construction and occupation of the proposed site would have no short or long-term influence on terrestrial wildlife populations or associated habitats and therefore would not interfere with continued meeting of the standard. The no-action alternative would similarly have no influence on continued meeting of the standard.

OTHER NON-CRITICAL ELEMENTS: For the following elements, only those brought forward for analysis will be addressed further.

Non-Critical Element	NA or Not Present	Applicable or Present, No Impact	Applicable & Present and Brought Forward for Analysis
Access and Transportation			X
Cadastral Survey	X		
Fire Management	X		
Forest Management	X		
Geology and Minerals			X
Hydrology/Water Rights	X		
Law Enforcement		X	
Noise		X	
Paleontology			X

Non-Critical Element	NA or Not Present	Applicable or Present, No Impact	Applicable & Present and Brought Forward for Analysis
Rangeland Management			X
Realty Authorizations			X
Recreation			X
Socio-Economics		X	
Visual Resources			X
Wild Horses	X		

ACCESS AND TRANSPORTATION

Affected Environment: The proposed action is located adjacent to BLM road 1039 within an area delineated as "open seasonally" which means travel is limited to existing roads from October 1 through April 30 of each year.

Environmental Consequences of the Proposed Action: As BLM 1039 will be upgraded for pad construction, an increase in traffic can be expected while pad is in operation. Increased road traffic may cause road surface degradation.

Environmental Consequences of the No Action Alternative: None.

Mitigation: None.

GEOLOGY AND MINERALS

Affected Environment: The surface geologic formation of the well locations is alluvium overlying the Mesaverde and EnCana's targeted zone is in the Mesaverde coals. During drilling potential water, coal, and gas zones will be encountered from surface to the targeted zone. This well is located 1 1/2 miles southeast of an area that is identified in the White River Resource Area RMP as suitable for surface and subsurface coal mining. It is located in the Calamity Ridge Unit in Federal oil and gas lease COC-063273.

Environmental Consequences of the Proposed Action: Cementing procedure of the proposed actions isolates the formations and will prevent the migration of gas, water, and oil between formations. The coal zones located the Mesaverde will also be isolated during this procedure. Development of these wells will remove the water and deplete the coal bed natural gas resources in the targeted formation.

Environmental Consequences of the No Action Alternative: The coal bed natural gas resources in the targeted formation would not be developed at this time.

Mitigation: None

PALEONTOLOGY

Affected Environment: The proposed access road and well pad are located in an area mapped as the Wasatch Formation (Tweto 1979) which the BLM has classified as a Condition I formation which means it is known to produce scientifically important fossil resources.

Environmental Consequences of the Proposed Action: If, for any reason it becomes necessary to excavate into the underlying bedrock formation to upgrade/maintain the access road, level the well pad or excavate the reserve/blooie pit there is a possibility to impact scientifically important fossil resources.

Environmental Consequences of the No Action Alternative: There would be no new impacts to cultural resources under the No Action Alternative.

Mitigation: 1. At the well pad location, specifically, any exposed outcrops of the Wasatch formation must be inventoried by an approved paleontologist with a report detailing the results of the inventory and any recommended mitigation must be submitted to the BLM prior to the initiation of construction.

2. If, at any time it becomes necessary to excavate into the underlying bedrock formation to upgrade/maintain the access road, level the well pad, or excavate the reserve/blooie pit a paleontological monitor shall be required.

RANGELAND MANAGEMENT

Affected Environment: The proposed project is located in the Spring Creek allotment, on which cattle are run on a year-round basis. The project area is used during the spring and fall.

Environmental Consequences of the Proposed Action: The access route goes through private land on which access is controlled by locked gates. If these gates are not kept closed there would be problems with livestock management. The livestock operator will be responsible for determining access requirements and livestock control measures associated with these gates.

Environmental Consequences of the No Action Alternative: There would be no impacts.

Mitigation: None

REALTY AUTHORIZATIONS

Affected Environment: The off lease portion of the access road will require a right-of-way and has been serialized as COC68409.

Environmental Consequences of the Proposed Action: The proposed action will involve the construction of well pad plus upgrading of the existing road.

Environmental Consequences of the No Action Alternative: Under the no action alternative, there wouldn't be any impacts.

Mitigation: 1. No surface disturbing activities shall take place on the subject right-of-way until the associated APD is approved. The holder will adhere to special stipulations in the Surface Use Program of the approved APD, relevant to any right-of-way facilities.

2. The holder shall furnish and apply water or use other means satisfactory to the authorized officer for dust control.

3. The holder shall protect all survey monuments found within the right-of-way. Survey monuments include, but are not limited to, General Land Office and Bureau of Land Management Cadastral Survey Corners, reference corners, witness points, U.S. Coastal and Geodetic benchmarks and triangulation stations, military control monuments, and recognizable civil (both public and private) survey monuments. In the event of obliteration or disturbance of any of the above, the holder shall immediately report the incident, in writing, to the authorized officer and the respective installing authority if known. Where General Land Office or Bureau of Land Management right-of-way monuments or references are obliterated during operations, the holder shall secure the services of a registered land surveyor or a Bureau cadastral surveyor to restore the disturbed monuments and references using surveying procedures found in the Manual of Surveying Instructions for the Survey of the Public Lands of the United States, latest edition. The holder shall record such survey in the appropriate county and send a copy to the authorized officer. If the Bureau cadastral surveyors or other Federal surveyors are used to restore the disturbed survey monument, the holder shall be responsible for the survey cost.

4. The holder shall recontour the disturbed area and obliterate all earthwork by removing embankments, backfilling excavations, and grading to re-establish the approximate original contours of the land in the right-of-way.

5. The holder shall perform the necessary transportation studies and recommend a road standard to meet the purpose of the road. This standard and the topography, soils, and geologic hazards of the lands crossed will define the level of survey and design necessary. Accepted standards for road design, including the BLM Manual Section may be used.

6. The holder shall obtain the services of a licensed professional engineer to locate, survey, design, and construct the proposed road as directed by the authorized officer. The road design shall be based on the (1) width, (2) maximum grade, and (3) design speed of the road.

7. The holder shall submit standard or typical cross sections of the road to be constructed, maintained, or reconstructed as directed by the authorized officer. The cross sections should include, but are not limited to, the proposed road width, ditch dimensions, cut and fill slopes, and typical culvert installation.

8. Clearing and grubbing debris shall not be places or permitted to remain in or under any embankment sections. Clearing and grubbing debris may be placed under waste material with a minimum of 3 feet or cover as directed by the authorizing officer.

9. Excavation and embankment quantities shall be balanced as nearly as design and construction considerations allow. Any waste and/or borrow needs shall be specifically identified by the holder.

10. Material encountered on the project and needed for select borrow, surfacing, riprap, or other special needs shall be conserved.

11. Excess excavated, unsuitable, or slide materials shall be disposed of as directed by the authorized officer.

12. If it is determined a culvert would serve the drainage crossings better than the low water crossing, the following conditions would apply:

- Culverts should be designed and constructed according to the standards provided in BLM Manual 9112. The design, review and evaluation must be accomplished under the direct supervision of a registered professional engineer.
- Culverts and lateral ditches shall be staked for location, skew, and elevation as directed by the authorized officer.
- As directed by the authorized officer, the holder shall submit a complete culvert list to reflect the drainage plant for the road. The list shall include, but not be limited to, size(s), length, and locations of the culverts.
- As directed by the authorized officer, construction stakes shall be set for each culvert to show location as well as inlet and outlet elevations, diameter, and length. The minimum diameter for culverts shall be 18 inches.

13. As directed by the authorized officer, surfacing shall be designed to accommodate anticipated loading and traffic volumes and shall provide for future maintenances.

14. As directed by the authorizing officer, all road segments shall be winterized by providing a well-drained roadway by water baring, maintaining drainage, and any additional measures necessary to minimize erosion and other damage to the roadway or the surrounding public land.

RECREATION

Affected Environment: The proposed action occurs within the White River Extensive Recreation Management Area (ERMA). BLM custodially manages the ERMA to provide for unstructured recreation activities such as hunting, dispersed camping, hiking, horseback riding, wildlife viewing and off-highway vehicle use.

The project area has been delineated a Recreation Opportunity Spectrum (ROS) class of Semi-Primitive Motorized (SPM). SPM recreation setting is typically characterized by a natural

appearing environment with few administrative controls, low interaction between users but evidence of other users may be present. SPM recreation experience is characterized by a high probability of isolation from the sights and sounds of humans that offers an environment that offers challenge and risk.

Environmental Consequences of the Proposed Action: The public will lose approximately 2 acres of dispersed recreation potential while wells are in operation. The public will most likely not recreate in the vicinity of these facilities and will be dispersed elsewhere. If action coincides with hunting seasons (September through November) it will most likely disrupt the experience sought by those recreationists.

With the introduction of new well pads and roads, an increase of traffic could be expected increasing the likelihood of human interactions, the sights and sounds associated with the human environment and a less naturally appearing environment.

Environmental Consequences of the No Action Alternative: No loss of dispersed recreation potential and no impact to hunting recreationists.

Mitigation: None.

VISUAL RESOURCES

Affected Environment: The proposed action would be located within a VRM class III area. The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.

Environmental Consequences of the Proposed Action: The proposed action would be located adjacent to an existing road along the West Fork of Spring Creek. Access to the proposed action by motorized travel would be possible only by traveling through private property. A casual observer would not be able to view the proposed action while traveling on either county road RBC 122 or RBC 103, since both roads basically follow the top of the ridgeline and the proposed action would be located along the bottom of the drainage. By painting all production facilities Juniper Green as stated in the APD, the level of change to the characteristic landscape would be low, and the objectives of the VRM III classification would be retained.

Environmental Consequences of the No Action Alternative: There would be no environmental consequences.

Mitigation: None

CUMULATIVE IMPACTS SUMMARY: The Cumulative impacts of oil and gas developments in this area were analyzed in the White River ROD/RMP, based on a reasonable foreseeable development scenario which assumed a total of ten acres per well/pad. This action would involve fewer acres, and the resultant cumulative impacts would be consistent with that analysis.

REFERENCES CITED:

Conner, Carl E.

2004 Class III Cultural Resources Inventory of a Proposed Pipeline Route (4.0 miles long) in the West Fork of Spring Creek and Spring Creek for Five West Fork Federal Wells in Rio Blanco County, Colorado for EnCana Oil and Gas (USA) Inc. Grand River Institute, Grand Junction, Colorado.

Conner, Carl E. and Barbara J. Davenport

2004 Class III Cultural Resource Inventory Report for Five Proposed Well Locations and Their Related New Access Roads in Rio Blanco County, Colorado for EnCana Oil and Gas (USA) Inc. Grand River Institute, Grand Junction, Colorado

Tweto, Ogden

1979 Geologic Map of Colorado. United States Geologic Survey, Department of the Interior, Reston, Virginia.

PERSONS / AGENCIES CONSULTED: None

INTERDISCIPLINARY REVIEW:

Name	Title	Area of Responsibility
Caroline Hollowed	Planning & Environmental Coordinator	Air Quality
Tamara Meagley	Natural Resource Specialist	Areas of Critical Environmental Concern
Tamara Meagley	Natural Resource Specialist	Threatened and Endangered Plant Species
Michael Selle	Archaeologist	Cultural Resources Paleontological Resources
Robert Fowler	Forester	Invasive, Non-Native Species
Brett Smithers	Natural Resource Specialist	Migratory Birds
Brett Smithers	Natural Resource Specialist	Threatened, Endangered and Sensitive Animal Species, Wildlife
Bo Brown	Hazmat Collateral	Wastes, Hazardous or Solid
Caroline Hollowed	Planning & Environmental Coordinator	Water Quality, Surface and Ground Hydrology and Water Rights
Ed Hollowed	Wildlife Biologist	Wetlands and Riparian Zones
Chris Ham	Outdoor Recreation Planner	Wilderness
Caroline Hollowed	Planning & Environmental Coordinator	Soils
Robert Fowler	Forester	Vegetation
Brett Smithers	Natural Resource Specialist	Wildlife Terrestrial and Aquatic
Chris Ham	Outdoor Recreation Planner	Access and Transportation
Ken Holsinger	Natural Resource Specialist	Fire Management
Robert Fowler	Forester	Forest Management
Paul Daggett	Mining Engineer	Geology and Minerals
Robert Fowler	Forester	Rangeland Management
Penny Brown	Realty Specialist	Realty Authorizations
Chris Ham	Outdoor Recreation Planner	Recreation
Keith Whitaker	Natural Resource Specialist	Visual Resources
Valerie Dobrich	Natural Resource Specialist	Wild Horses

Finding of No Significant Impact/Decision Record (FONSI/DR)

CO-110-2005-037-EA

FINDING OF NO SIGNIFICANT IMPACT (FONSI)/RATIONALE: The environmental assessment and analyzing the environmental effects of the proposed action have been reviewed. The approved mitigation measures (listed below) result in a Finding of No Significant Impact on the human environment. Therefore, an environmental impact statement is not necessary to further analyze the environmental effects of the proposed action.

DECISION/RATIONALE: It is my decision to approve the development of this project as described in the proposed action, with the mitigation measures listed below. This development, with mitigation, is consistent with the decisions in the White River ROD/RMP, and environmental impacts will be minimal.

MITIGATION MEASURES: 1. Applicant shall be required to spread water on road surfaces to control fugitive dust. The holder shall furnish and apply water or use other means satisfactory to the authorized officer for this dust control.

2. The operator is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are uncovered during any project or construction activities, the operator is to immediately stop activities in the immediate area of the find that might further disturb such materials, and immediately contact the authorized officer (AO). Within five working days the AO will inform the operator as to:

- whether the materials appear eligible for the National Register of Historic Places
- the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not necessary)
- a timeframe for the AO to complete an expedited review under 36 CFR 800-11 to confirm, through the State Historic Preservation Officer, that the findings of the AO are correct and that mitigation is appropriate.

3. If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation cost. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the operator will then be allowed to resume construction.

4. Pursuant to 43 CFR 10.4(g) the holder of this authorization must notify the AO, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), you

must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the authorized officer.

5. Permit holder is required to revegetate the site using Standard Seed Mix 3 from the White River ROD/RMP Table B-1:

Seed Mix #	Species (Variety)	Lbs PLS/ Acre	Range sites
3	Pubescent wheatgrass (Luna) Western wheatgrass (Rosanna) Crested wheatgrass (Ephraim) Indian ricegrass (Nezpar) Orchardgrass (Paiute) Yellow sweetclover (Midrid)	4 2 1 1 1 0.5	Deep Loam, Loamy 10"-14", Loamy Breaks, Loamy Slopes, Rolling Loam, Valley Bench

6. Permit holder is required to control noxious weeds within the project area. Application of herbicides must be under field supervision of an EPA-certified pesticide applicator. Herbicides must be registered by the EPA and application proposals must be approved by the BLM.

7. The applicant has voluntarily agreed to postpone construction activities from 1 July to 15 July to avoid possible disturbance to nesting migratory birds within and adjacent to the project area. As such, construction activities will be authorized to begin on 15 July 2005.

8. The operator shall be required to collect and properly dispose of any solid wastes generated by the proposed actions.

9. A low-water crossing is considered preferable to culvert designs. Successful stream crossings in fine alluvial material have been achieved in other parts of the Resource Area when a geo-textile fabric was used in conjunction with a compartmentalized gabion or blanket device. This crossing should be developed so as not to interfere with ongoing stream channel processes, that is, the final grade of the structure must be no lower than current channel bed and floodplain and should not exceed 18” above the current profile. In order to gain coincident long-term benefits to the channel, it is recommended that the low-water structure be elevated between 12 and 18 inches above existing channel and floodplain levels and closely approximate the channel’s current geometry. The structure should extend an appropriate distance beyond either side of the floodplain to fully accommodate flood flows.

10. At the well pad location, specifically, any exposed outcrops of the Wasatch formation must be inventoried by an approved paleontologist with a report detailing the results of the inventory and any recommended mitigation must be submitted to the BLM prior to the initiation of construction.

11. If, at any time it becomes necessary to excavate into the underlying bedrock formation to upgrade/maintain the access road, level the well pad, or excavate the reserve/blooie pit a paleontological monitor shall be required.

12. No surface disturbing activities shall take place on the subject right-of-way until the associated APD is approved. The holder will adhere to special stipulations in the Surface Use Program of the approved APD, relevant to any right-of-way facilities.

13. The holder shall protect all survey monuments found within the right-of-way. Survey monuments include, but are not limited to, General Land Office and Bureau of Land Management Cadastral Survey Corners, reference corners, witness points, U.S. Coastal and Geodetic benchmarks and triangulation stations, military control monuments, and recognizable civil (both public and private) survey monuments. In the event of obliteration or disturbance of any of the above, the holder shall immediately report the incident, in writing, to the authorized officer and the respective installing authority if known. Where General Land Office or Bureau of Land Management right-of-way monuments or references are obliterated during operations, the holder shall secure the services of a registered land surveyor or a Bureau cadastral surveyor to restore the disturbed monuments and references using surveying procedures found in the Manual of Surveying Instructions for the Survey of the Public Lands of the United States, latest edition. The holder shall record such survey in the appropriate county and send a copy to the authorized officer. If the Bureau cadastral surveyors or other Federal surveyors are used to restore the disturbed survey monument, the holder shall be responsible for the survey cost.

14. The holder shall recontour the disturbed area and obliterate all earthwork by removing embankments, backfilling excavations, and grading to re-establish the approximate original contours of the land in the right-of-way.

15. The holder shall perform the necessary transportation studies and recommend a road standard to meet the purpose of the road. This standard and the topography, soils, and geologic hazards of the lands crossed will define the level of survey and design necessary. Accepted standards for road design, including the BLM Manual Section may be used.

16. The holder shall obtain the services of a licensed professional engineer to locate, survey, design, and construction the proposed road as directed by the authorized officer. The road design shall be based on the (1) width, (2) maximum grade, and (3) design speed of the road.

17. The holder shall submit standard or typical cross sections of the road to be constructed, maintained, or reconstructed as directed by the authorized officer. The cross sections should include, but are not limited to, the proposed road width, ditch dimensions, cut and fill slopes, and typical culvert installation.

18. Clearing and grubbing debris shall not be places or permitted to remain in or under any embankment sections. Clearing and grubbing debris may be placed under waste material with a minimum of 3 feet or cover as directed by the authorizing officer.

19. Excavation and embankment quantities shall be balanced as nearly as design and construction considerations allow. Any waste and/or borrow needs shall be specifically identified by the holder.

20. Material encountered on the project and needed for select borrow, surfacing, riprap, or other special needs shall be conserved.

21. Excess excavated, unsuitable, or slide materials shall be disposed of as directed by the authorized officer.

22. If it is determined a culvert would serve the drainage crossings better than the temporary low water crossing, the following conditions would apply:

- Culverts should be designed and constructed according to the standards provided in BLM Manual 9112. The design, review and evaluation must be accomplished under the direct supervision of a registered professional engineer.
- Culverts and lateral ditches shall be staked for location, skew, and elevation as directed by the authorized officer.
- As directed by the authorized officer, the holder shall submit a complete culvert list to reflect the drainage plant for the road. The list shall include, but not be limited to, size(s), length, and locations of the culverts.
- As directed by the authorized officer, construction stakes shall be set for each culvert to show location as well as inlet and outlet elevations, diameter, and length. The minimum diameter for culverts shall be 18 inches.

23. As directed by the authorized officer, surfacing shall be designed to accommodate anticipated loading and traffic volumes and shall provide for future maintenances.

24. As directed by the authorizing officer, all road segments shall be winterized by providing a well-drained roadway by water baring, maintaining drainage, and any additional measures necessary to minimize erosion and other damage to the roadway or the surrounding public land.

25. When erosion is anticipated, sediment barriers shall be constructed to slow runoff, allow deposition of sediment, and prevent it from leaving the site. In addition, straining or filtration mechanisms may also contribute to sediment removal from runoff

NAME OF PREPARER: Brett Smithers

NAME OF ENVIRONMENTAL COORDINATOR: Caroline Hollowed

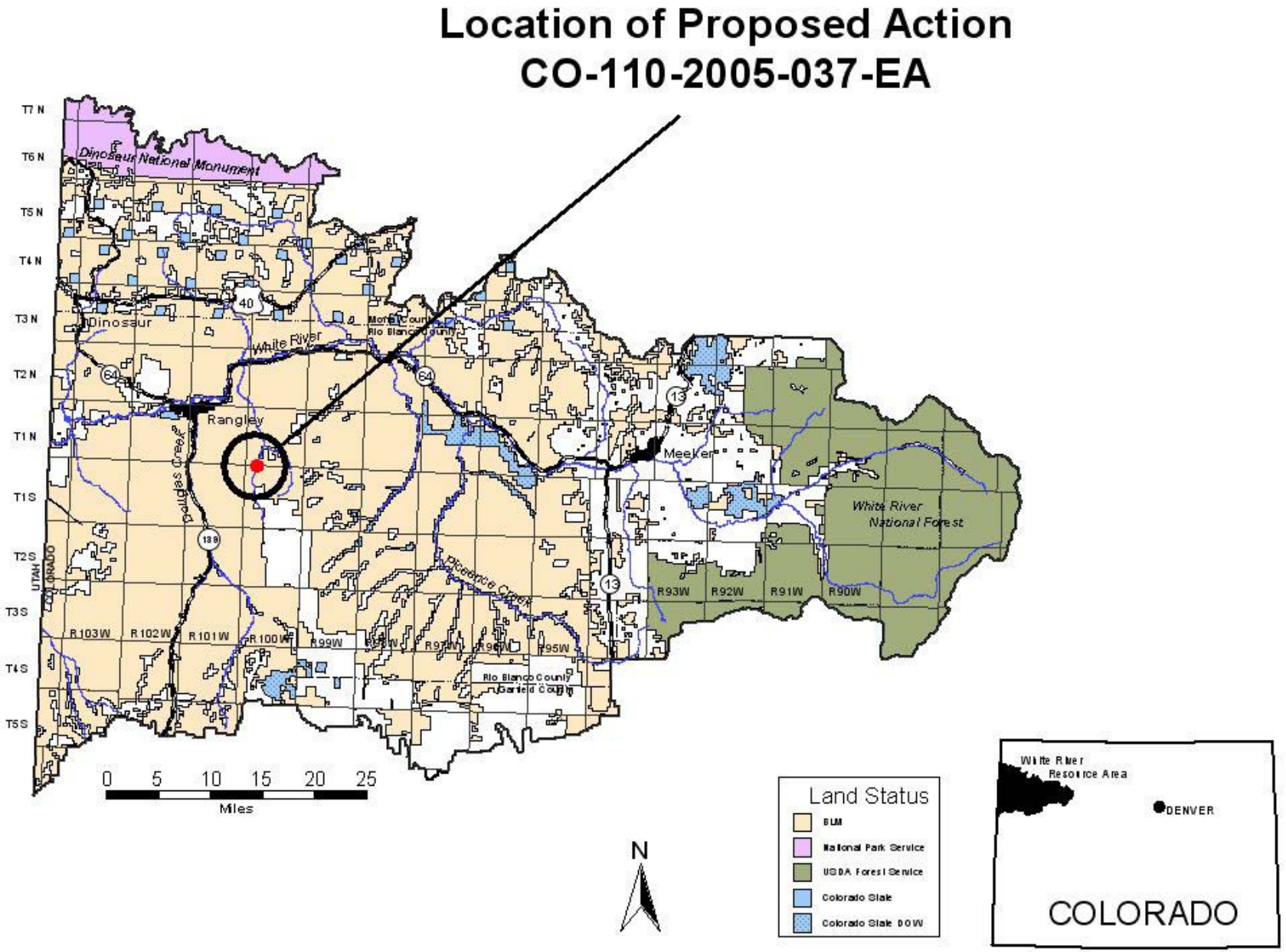
SIGNATURE OF AUTHORIZED OFFICIAL: Kent C. Walter

Field Manager

DATE SIGNED: 2/4/05

ATTACHMENTS: Figure 1; Location map of the proposed action.
Figure 2; Location of Low Water Crossing

Figure 1


Location of Proposed Action
CO-110-2005-037-EA
T7 N
T6 N
T5 N
T4 N
T3 N
T2 N
T1 N
T1 S
T2 S
T3 S
T4 S
T5 S
Dinosaur National Monument
Dinosaur
White River
Rangley
Douglas Creek
Piceance Creek
Meeker
White River National Forest
UTAH
COLORADO
R103W
R102W
R101W
R100W
R99W
R93W
R92W
R91W
R90W
Rio Blanco County
Garfield County
0 5 10 15 20 25
Miles
N
Land Status
BLM
National Park Service
USDA Forest Service
Colorado State
Colorado State DOW
White River Resource Area
DENVER
COLORADO

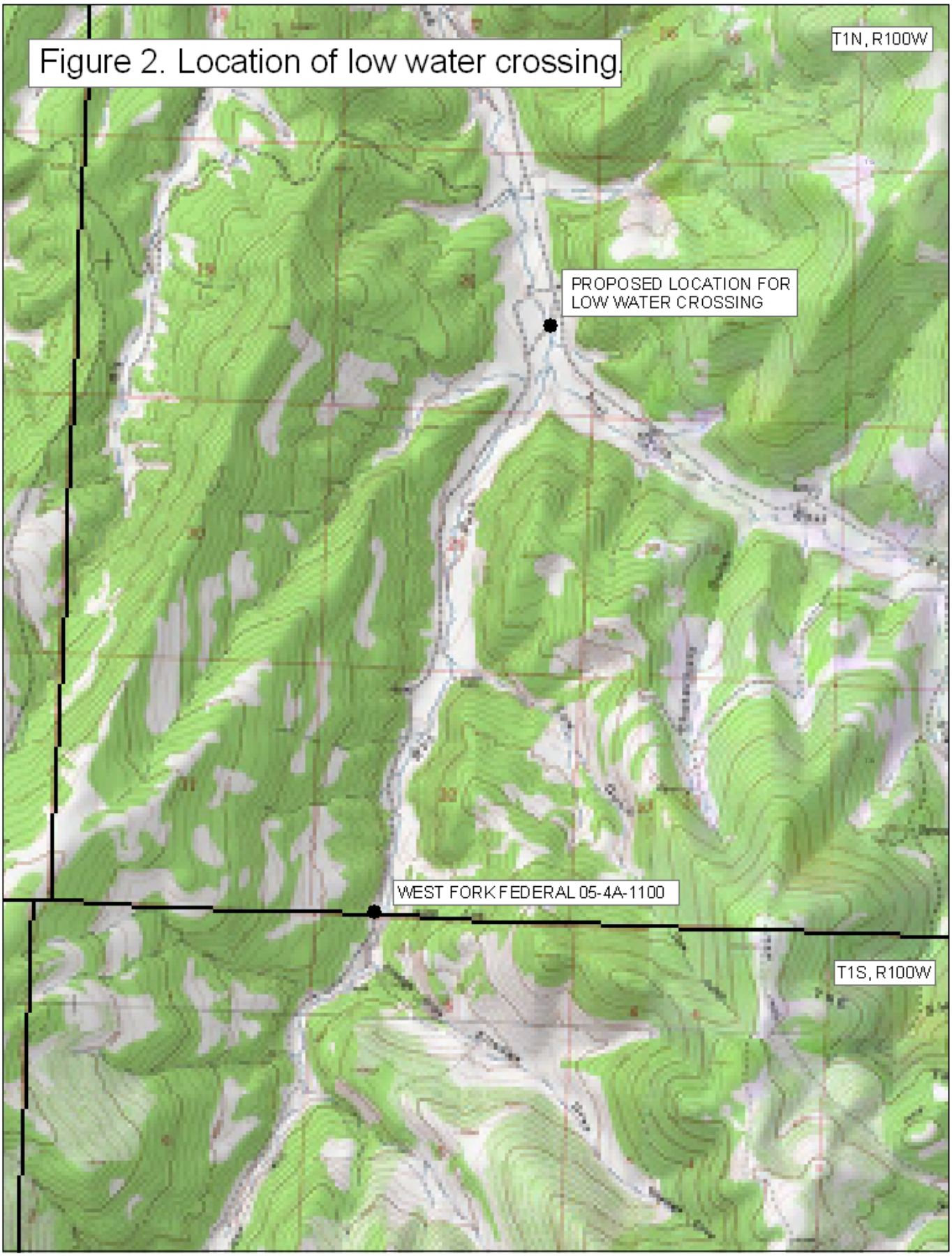


Figure 2. Location of low water crossing.
T1N, R100W
PROPOSED LOCATION FOR
LOW WATER CROSSING
WEST FORK FEDERAL 05-4A-1100
T1S, R100W